DOCUMENT RESUME

ED 300 164 RC 016 767

AUTHOR Hobart, Christine L.
TITLE Population Growth in New Hampshire during the Nineteenth and Twentieth Centuries. Studies in New England Geography, Number 1.
INSTITUTION Keene State Coll., NH. Dept. of Geography.
PUB DATE Aug 86
NOTE 33p.
AVAILABLE FROM Dr. A. L. Ryant, Dept. of Geography, Keene State College, Keene, NH 03431 ($4.00).
PUB TYPE Historical Materials (060) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Geographic Regions; Human Geography; Modernization; Population Distribution; *Population Growth; Rural Economics; Urbanization
IDENTIFIERS *New Hampshire; Nineteenth Century; Twentieth Century

ABSTRACT

This paper traces the shifts in New Hampshire's state and county population during the nineteenth and twentieth centuries, focusing on the growth of urban centers and industry. From 1790 to 1840 most of New Hampshire's population growth was agricultural despite the beginnings of industrialization and urbanization. These processes greatly accelerated during the decades from 1840 to 1900; the railroad network expanded, industries multiplied, and by 1900, 46.7% of New Hampshire's population lived in urban areas. The development of Manchester as New Hampshire's leading manufacturing city and textile center was aided by immigration. The report also describes development of the lumbering and pulp industries. From 1900 to 1950, although population increased 29.5%, many industries moved out of the state and the textile industry declined substantially. Farm abandonment was widespread, with the amount of land used for farms declining from 64% in 1880 to 31% in 1940. Population decline reversed from 1950 to 1980, and by 1982 New Hampshire was the fastest growing state east of the Mississippi River with most of the population growth occurring in the southern part of the state. Reasons for the growth include the expansion of the highway system, the development of bedroom suburbs for Boston commuters, enhancement of the post secondary educational system, tourism, and development of a high technology industry. During the 1960s the state teachers' colleges became state colleges, enlarged their physical plants, and generally attracted a greater variety and number of students. Continuing growth may lead to problems. The need for a broad-based tax to support growth and continuing urbanization and suburbanization may spoil New Hampshire's modern lures: no income tax and unspoiled rural beauty. (DHP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED300164

MAR 1988
RECEIVED
ERIC/CRESS

POPULATION GROWTH IN NEW HAMPSHIRE DURING THE NINETEENTH AND TWENTIETH CENTURIES

Christine L. Hobart
Keene State College

STUDIES IN NEW ENGLAND GEOGRAPHY
Number 1
August, 1986

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
CHRISTINE L. HOBART
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

RC016767

STUDIES IN NEW ENGLAND GEOGRAPHY, Editor, Dr. A.L. Rydant, Department of Geography, Keene State College, Keene, New Hampshire, 03431 (603)352-1909

BEST COPY AVAILABLE

New Hampshire's population has undergone substantial change within the past three hundred and fifty years. The State has been transformed from a rural, agricultural, and mercantilistic society, with widely scattered settlements, to a highly industrialized state with the fastest growing population east of the Mississippi River (Booth, 1972). After a brief examination of New Hampshire's colonial settlement patterns, this paper will trace the shifts in state and county population during the nineteenth and twentieth centuries, focusing on the growth of urban centers and industry, as well as the problems presented by this growth.

COLONIAL NEW HAMPSHIRE

The first English settlers arrived in New Hampshire in 1623, primarily moving northward from the Massachusetts Bay area. They were mostly fis rmen, settling along the short coastline. According to William Wallace (1977) of the University of New Hampshire,

> Settlement in New Hampshire was complicated by the diverse origins and purposes of the first...towns...The two earliest settlements at Pannaway (1623) and Hilton Point (1629), as well as their later neighbors at Strawbery Banke (1630) and Dover Neck (1633) were established as fishing and trading stations. Accordingly, the situations and sites of these pioneer settlements were not determined by their agricultural potential, but rather by access to the fishery and the fur and timber trade...in these first outposts, agriculture was a subordinate and often neglected pursuit. Exeter (1638) and Hampton (1639), both settled by Puritans from Massachusetts, were from their beginnings intended to be agricultural communities.

Robert Booth (1982), writing for the National Geographic magazine, notes that the first settlers "...did not come seeking religious freedom. Instead, in grand New Hampshire tradition, they came to make money. They were fishermen." The universality of this statement is somewhat questionable, however, since Exeter was founded by the Reverend John Wentworth, who had been expelled from the Massachusetts Bay Colony for heresy, while Hampton was founded by Anne Hutchinson, a loyal follower of Wentworth. Fishing, however, was the major reason for the settlement of Strawbery Banke and other areas.

New Hampshire's population grew slowly. Massachusetts annexed New Hampshire in 1641, adding approximately 8782 white residents (Historical Statistics) to New Hampshire's estimated population of 800 (N.H. State Planning) making a combined population total of 9582. Subsequently, settlers spread up through the Merrimack and Connecticut River valleys (Wallace, 1977). When New Hampshire was granted her own independent charter in 1692, the population totaled approximately five thousand. After the Indian threat was finally reduced by the British victory in the French and Indian War of 1763, population in New Hampshire increased by almost 60%, to approximately 60,000 in 1770 (Table 1).

TABLE 1

ESTIMATED POPULATION OF NEW HAMPSHIRE, 1630-1780

1630.....500	1710.....7500
1640.....800	1720.....9500
1650.....1400	1730.....12,000
1660.....2300	1740.....22,000
1670.....3000	1750.....31,000
1680.....4000	1760.....38,000
1690.....5000	1770.....60,000
1700.....6000	1780.....84,000

Source: New Hampshire State Planning and Development Commission, Population of New Hampshire: Basic Data on Growth and Distribution Since the Time of Settlement, 1623-1940 (Concord, NH: 1946).

NEW HAMPSHIRE: 1790-1840

POPULATION: STATE AND COUNTIES

After the Revolutionary War (1776-1783), settlements began to appear in the central, western, and more northern parts of New Hampshire. The 69% population growth rate in the state from 1780-1790 was due primarily to the lifting of British settlement controls. After losing the War, the British could no longer restrict American settlement expansion to the north or to the west.

By 1790, the date of the first United States Census, the population totaled 141,885, divided among five counties. These counties included Grafton in the north, Cheshire in the southwest, Hillsborough in the south-center, Rockingham in the southeast, and Strafford in the center-east. All five counties were organized on March 19, 1771 from colonial lands (NH Census of 1850, 1978). Grafton County was subdivided twice, first in 1803 to form Coos County in the extreme northern part of New Hampshire, then in 1840 to form Carroll County which extended east to the Maine border. Merrimack County was formed in 1823 from parts of Rockingham and Hillsboro Counties; Sullivan County was part of Cheshire County until 1827. Finally, Belknap County was organized in 1840, separating from Strafford (N.H. Census of 1850, 1978). By 1840 the ten present-day counties of New Hampshire had been organized (see Figure 1).

A comparison of population growth in the original five counties from 1790-1800 with the United States as a whole shows some interesting patterns (Table 2). Cheshire, Hillsborough, and Strafford counties experienced growth

New Hampshire
Counties
COOS
(1803)
Berlin
Vermont
Maine
GRAFTON
(1771)
CARROLL
(1840)
BELKNAP
(1840)
SULLIVAN
(1827)
MERRIMACK
(1823)
Concord
STRAFFORD
(1771)
Manchester
Keene
CHESHIRE
(1771)
HILLS-
BOROUGH
(1771)
ROCKINGHAM
(1771)
Nashua
Massachusetts

Figure 1

TABLE 2

POPULATION CHANGE BY COUNTY, 1790-1800

COUNTY	1790	1800	CHANGE	%
Cheshire	28,753	38,825	+10,072	35
Grafton	13,468	23,093	+ 9,625	71
Hillsborough	32,881	43,899	+11,018	34
Rockingham	43,185	45,427	+ 2,242	05
Strafford	23,609	32,614	+ 9,005	38
TOTAL N.H.:	141,896	183,858	+41,973	30
TOTAL U.S.:	3,929,214	5,308,483	+1,379,269	35

Sources: U.S. Census, 1790, 1800.

rates of approximately 35, 34, and 38 percent, respectively, which is similar to the national growth rate of 35% for this time period. Grafton County, with the smallest population, experienced the highest growth rate (approximately 71%), probably due to new settlements in a relatively empty area while Rockingham County had the lowest growth rate (approximately 5%). Many of the towns in Rockingham County, including Salem, Rye, Newmarket, and Kensington, lost population during this time. Harold F. Wilson (1934a), referring to the period from 1790-1830, accounts for the loss in this manner:

> Although by far the greater number of towns...grew constantly during this period, by its end a marked and steady decrease in population had set in in the earlier settled parts. The call of the new lands to the north and sporadic migration from the older communities into western territory accounted for much of this drop. In long-occupied Rockingham County, in the southeastern corner of New Hampshire, a number of towns decreased in population in more than one decade of these forty years...

Between 1790 and 1840, New Hampshire's growth was agriculturally oriented (Lewis, 1972). Wilson (1934a) notes that "This was a period of self-sufficiency in agriculture, when the farmers and their families derived their subsistence chiefly from their farms and sold only the incidental surplus for cash or

bartered it for merchandise." During this period, settlements were scattered as "...a result of agrarian determinants regarding the sufficiency of the soil and topography and the proximity of the market centers and religious institutions for servicing and shepherding the farm-based population" (Geiser, 1982).

THE BEGINNINGS OF INDUSTRIALIZATION AND URBANIZATION, 1790-1840

The slow, steady growth of towns changed much of the subsistence farming into commercial farming. In 1794 water power was first used for carding wool, and the first cotton mill in New Hampshire was established in New Ipswich near the turn of the century. By 1826, there were fifty cotton mills and twenty-five woolen mills in New Hampshire (Sanborn, 1875). These mills were established wherever there was sufficient water power available to run them, particularly along the banks of the Connecticut and Merrimack Rivers.

Initially, industry and agriculture complemented each other. Commercial agriculture expanded around 1812 to include sheep-raising in order to supply wool to the local mills (Sanborn, 1875). Industries provided jobs for local populations and its workers served as consumers for farm products. According to Wilson (1934a)

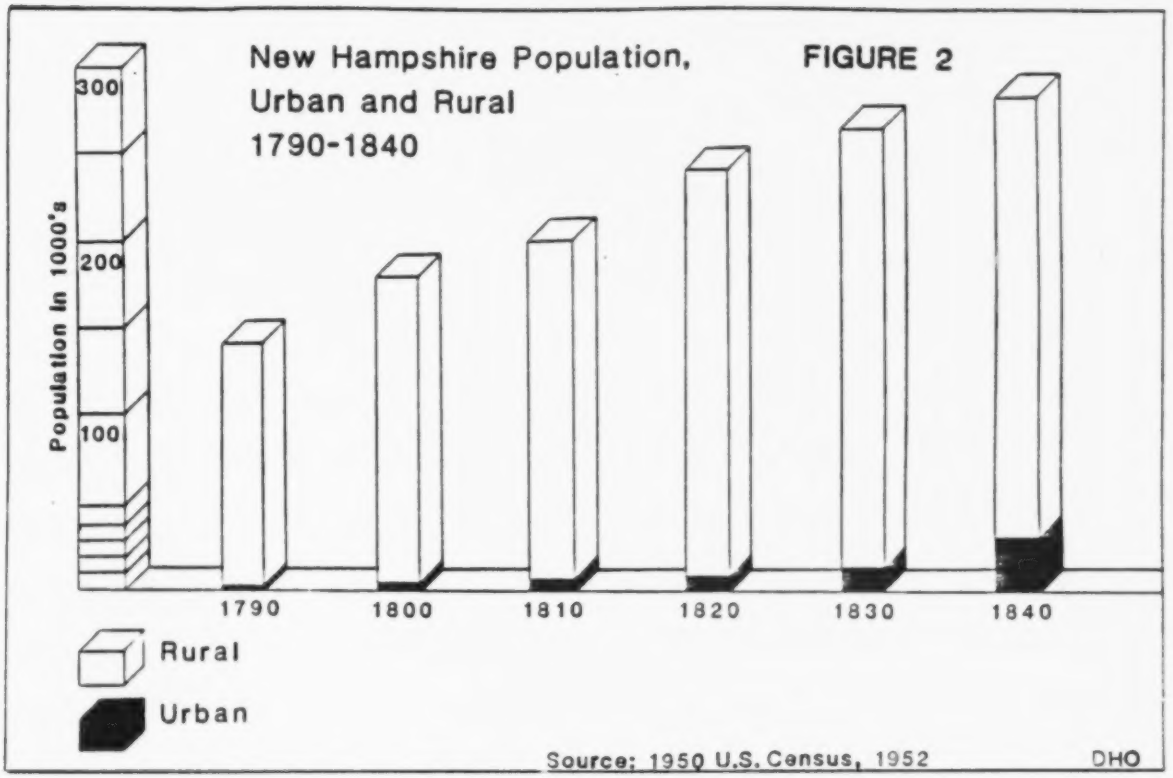
> ...the trend during the transition from a self-sufficient to a commercial agriculture...(was) hastened by the advent of the railroad into New Hampshire in the late thirties...this period saw the flourishing of the sheep industry on the upland farms, and in these decades the rural population of the territory reached high tide. New Hampshire had attained its maximum by 1840.

The Industrial Revolution of the 1820s and 1830s helped alter population patterns in New Hampshire. The invention of steam engines freed mills from

water sites allowing mill towns to disperse over the rural countryside. Steam engines also brought about the development of the railroad which, in turn, hastened the development of urban areas in New Hampshire. Settlements multiplied and expanded; the railroad tied together both market and rural zones. Farmers prospered, as they could now ship their products further afield. Towns became focal points for rail transportation and subsequently grew in area and population. Benjamin Labarre (1982) surmises that large-scale urban development "...probably could not have taken place...were it not for a technological innovation that encouraged both the concentration of population and the ability of a minority of inhabitants to support the majority's need for foodstuffs. This innovation was the railroad."

Railroads also encouraged farm abandonment among the less prosperous farmers. Easy access to the West, where better land was available, and to the mill towns, where industrial jobs were plentiful, started a shift in the urban-rural growth ratio. Many rural areas began losing population to the towns, particularly young men and women seeking enhanced economic opportunities. According to John Stilgoe (1980), "By the 1840s, New Englanders were deserting the hill country for the West and for urban life, and...most residents of the region dismissed farming as unprofitable."

Urban and rural populations, compared in Figure 2 for the years 1790 to 1840, show not only a doubling of population in just 50 years, but also that by 1840 urban population was increasing at a faster rate than rural population. This is particularly true in the decade from 1830 to 1840 when urban populations increased by 112%, while rural populations increased only by 0.1%. In fifty years, New Hampshire's population had grown from 3.3 percent urban in 1790 to 10 percent urban in 1840 (1950 U.S. Census, 1952).


New Hampshire Population,
Urban and Rural
1790-1840
FIGURE 2
Population in 1000's
300
200
100
1790
1800
1810
1820
1830
1840
Rural
Urban
Source: 1950 U.S. Census, 1952
DHO

POPULATION CHANGES, 1840-1900

The processes of urbanization and industrialization which commenced earlier in the nineteenth century greatly accelerated during the six decades from 1840 to 1900. The railroad network expanded, industries multiplied, and by 1900, 46.7% of New Hampshire's population (411,588) lived in urban areas. One of the major reasons for this shift was the establishment and incredible growth of the Amoskeag Manufacturing Company of Manchester, which, during this period of time, became the largest textile manufacturing complex in the world (Booth, 1982). (The development of Manchester as New Hampshire's leading manufacturing city will be discussed in detail below.)

One of the primary reasons for the continued rural-to-urban migration was that urban employment provided more money yet with a smaller commitment of time and effort than did jobs in rural areas. "With about one-third the number of workmen and one-half as much capital as the farmers, the factories yield nearly double the income of the land" (Sanborn, 1875). Harold F. Wilson (1934b) states that:

> As manufacturing increased, whole families moved to the mill towns.... This development was especially impressive in New Hampshire, where the total number of men engaged in agriculture dropped 40% between 1840 and 1870, whereas the number of those engaged in manufacturing rose by 288%.

Rural agricultural development was hindered by the short growing season in New Hampshire, generally poor quality land, "...the Civil War, the expansion of the factory system, and the opening of the Western states" (Lewis, 1972). All of these factors, as G.K. Lewis (1972) asserts, "...combined to close the door on rural, agricultural expansion in northern New England."

The Civil War caused a serious disruption in both industrial development and population growth. New Hampshire's population dropped from 325,073 in 1860 to 318,300 in 1870, partly due to war casualties and partly due to the fact that once native New Hampshire men left to fight they rarely wanted to return--they settled in more promising areas elsewhere (Hanlon, 1979). Immigrants from Canada, Ireland, and Scotland replaced much of the native population (this development will be explored in greater detail below). The factories in Manchester were shut down temporarily during the War because of the cut-off of the supply of cotton from the South.

The sheep industry declined in the 1880s due to competition from abroad. Labarre (1982) notes that by 1880, "...the number of sheep in New England had declined by almost 60% from the heydays of the 1840s, and the industry would soon thereafter become virtually insignificant as a source of income in the region." Imported wool from Australia and South America helped destroy the sheep industry of rural New Hampshire (Wilson, 1934a).

Tables 3 and 4 summarize population changes by county and the rural-to-urban shift from 1840 to 1900.

TABLE 3
POPULATION CHANGES BY COUNTY, 1840-1900

	1840	1850	1860	1870	1880	1890	1900
NEW HAMPSHIRE	284,574	317,976	326,073	318,300	346,991	376,530	411,588
Belknap	17,988	17,721	18,549	17,681	17,948	20,321	19,526
Carroll	21,313	21,507	20,465	17,332	18,224	18,124	16,895
Cheshire	26,429	30,134	27,434	27,265	28,734	29,579	31,321
Coos	8,526	10,503	13,161	14,932	18,580	23,211	29,468
Grafton	40,495	40,455	40,395	38,307	38,788	37,217	40,844
Hillsborough	42,494	57,478	62,140	64,238	75,634	93,247	112,640
Merrimack	38,052	42,225	43,273	42,947	46,300	49,435	52,430
Rockingham	45,771	49,194	50,122	47,297	49,064	49,650	51,118
Strafford	23,166	29,384	31,493	30,243	35,558	38,442	39,337
Sullivan	20,340	19,375	19,041	18,058	18,161	17,304	18,009

Source: New Hampshire State Planning and Development Commission, 1946.

TABLE 4
URBAN VS. RURAL PERCENTAGES, 1840-1900

YEAR	PERCENT URBAN	PERCENT RURAL
1840	10.0	90.0
1850	17.1	82.9
1860	22.1	77.9
1870	26.2	73.8
1880	30.0	70.0
1890	39.3	60.7
1900	46.7	53.3

Source: U.S. Census, 1950.

As Table 3 indicates, from 1840 to 1900 Carroll and Sullivan Counties lost 21 and 11 percent of their populations, respectively; Grafton County registered a minute gain. Two counties, Hillsborough in the south and Coos in the north, virtually tripled their populations, primarily due to the industrialization of Manchester and Berlin. The industrialization and urbanization processes of these two cities led the process of urbanization in New Hampshire.

MANCHESTER

Manchester (formerly called Derryfield) industrialized much like any other small town in New Hampshire. Small cotton mills, operating on water power, had been established on the banks of the Merrimack River by the early nineteenth century. In 1807 Blodgett's Canal (later renamed the Amoskeag Canal) was completed. It was named after a wealthy eccentric who visualized an economical transportation route to Boston. The canal provided a direct water route from Concord to Boston, cutting transportation costs from an average of $20.00 per ton to $4.00 per ton by 1838 (Hanlon, 1979). Manchester, therefore, became a central dispersing point for commerce.

Manchester's soil was too sandy for productive agriculture, so the mills and the canal were welcomed as viable economic alternatives. Hanlon (1979) supports this:

> In the later 1820s and throughout the 1830s, Manchester's factories would function as a supplement to the older society and economy. The fledgling factories gave economic opportunities to the farmer's sons, daughters, or brothers who, thanks to the diversity provided by the mills and canals, could find off-the-farm employment.... The factory complemented agrarian lifestyles, by providing the farmer with extra work and income, but, beyond that, the factory also provided a market for the produce of the farms. Workers required food-stuffs. The manufacturing process itself required wool. The machinery required leathers.

Manchester's population increased from 761 in 1820 to 877 in 1830, a 15% growth rate. This was about average for a rural area in New Hampshire during that time period. With the advent of the steam-powered engine in the 1820s, the scope of the textile industry enlarged considerably. Many factories expanded by buying unproductive local farms, a move which farmers actually welcomed (Hanlon, 1979).

The largest of these textile factories, the Amoskeag Manufacturing Company, was incorporated in 1831, capitalized at one million dollars*. The Amoskeag Company took over many of the existing mills, actions which did not seem to alarm the local population.

> Local residents, by now grown used to a gradual process of industrialization, assumed the factories would continue to remain as supplementary to the existing society.... So long as the mills had operated in this fashion, complementing local farms, there was no difficulty. Starting about 1840, however, the process began to reverse itself. The older economy and society was becoming increasingly less important than, and supplementary to, the newer order (Hanlon, 1979).

---

*The following information regarding Manchester's work force is from Hanlon, 1979.

The population growth of Manchester from 1830 to 1840 paralleled this industrial expansion and was an astronomical 269%. By the mid-1840s, the population of the town was slightly over 8,000; by the end of the decade, it was nearly 14,000. Most of the migrants to Manchester in this early period were from small towns in New England, especially those within a twenty-five mile radius. More women and girls came to Manchester than did men, for working in the mills provided one of the few legitimate sources of extra income. By 1849, there were 45% more women than men in Manchester. By 1850, 58.6% of the general population were women, and over 64% of the work force consisted of women. Most of them (95%) worked in the textile mills, compared to 62% of the male work force working in textiles (Hanlon, 1979).

By 1839, the Amoskeag Manufacturing Company owned four factories in Manchester, employing more than 1,600 men and women in textiles alone. The Amoskeag Company eventually bought out the other mills in town, including the Stark Mills, which was as large an operation as the Amoskeag Mills, and the Manchester Print Works, which had started the process of printing on textiles. According to Hanlon (1979),

> The investment of capital was massive, almost unprecedented for the nation, and certainly more than New Hampshire had ever seen.... The growth of industrial operations began to displace the older residents from their customary lifestyles ...the town was forcefully introduced to the realities of the modern industrial age.

Immigration added substantially to Manchester's population growth during the decades from 1840-1870. Table 5 shows the ethnic composition of Manchester in 1850. By this time the Irish constituted 65% of foreign workers in Manchester, primarily due to the potato famine in Ireland during the 1840s, which drove many hungry people to look for a new life in the United States.

TABLE 5

ETHNICITY, MANCHESTER--1850

COUNTRY	% OF TOTAL	% OF FOREIGN BORN
Native United States	85.4	-
Ireland	9.5	65.3
England	1.5	10.3
Canada	3.3	22.3
Scotland	0.3	1.7
Switzerland	-	0.2

Source: Hanlon, 1979.

The Civil War (1860-1865) precipitated a major change in the composition of the Manchester work force. From 1860-1870, the percentage of people from New Hampshire in the city's work force declined from 40 to 33%, while the percentage of foreign-born workers increased from 11 to 26. Other U.S. citizens comprised the remaining 41% in 1870, registering only a 1% increase from the previous decade. French Canadians and the Irish were the major immigrant groups, replacing many of the native New Hampshire workers. Hanlon notes that Manchester faced severe problems during the 1860s:

> In addition to the challenge of facing the Civil War, Manchester would face the temporary shutdown of the textile mills, the town's raison d'etre. After the war, Manchester faced a new industrial situation and the mills of post-Civil War Manchester were different, in many ways, from those of pre-Civil War years. Perhaps one of the most significant changes was the predominance of a foreign born (or second generation) work force which would be commonplace in many factories after the war.

In 1860, just before the start of the Civil War, fully 72% of Manchester's work force of 7,707 people were involved with the textile industry. This included 50.5% of all the male workers in Manchester and 87.4% of all the female workers. The shutdown of the textile mills during the war, caused

mainly by the cut-off of the supply of cotton from the South, caused massive unemployment. "Many of the native born who left town either to return home or to fight in the war did not return (to Manchester), and when the mills started up again, they would rely on foreign help."

Along with the French-Canadian and Irish workers, a major immigrant group specifically recruited to work in the Amoskeag Mills were Scotsmen. The Scots were noted for their textile skills, so in 1868 and 1870, Scots were actively recruited for work in Manchester. By 1880, over 90% of the Scottish-born workers in Manchester were employed in the textile industry. By 1870, between one-quarter and one-third of the city's population was foreign-born, and most of them worked in the factories. Hillsborough and Coos counties were the only two counties during the Civil War to gain population, due to the massive emmigrations to Manchester and Berlin, respectively. Berlin was a minor focal point for French-Canadian migration, as there was work available in the paper mills and lumber industry (Berlin's growth is discussed below).

The Amoskeag Mills, "...at one point in time, accounted directly, by itself, for the employment of nearly 60% of the entire work force of Manchester" (Hanlon, 1979). It became the world's largest cotton textile plant. By 1890, Hillsborough County contained 25% of New Hampshire's population, and within Hillsborough, Manchester contained 47% of the population (N.H. State Planning, 1946; Hanlon, 1979). Manchester, due to the textile industry, thus became a major focus of New Hampshire population from the mid-nineteenth century to the present.

BERLIN

Berlin, in northern Coos County (see Figure 1), developed an extensive lumbering and pulp mill industry during the nineteenth century. Located on the Androscoggin River, Berlin was the only major center of population in northern New Hampshire, and the town was probably responsible for Coos County's consistent growth during the nineteenth century. In 1847, the Atlantic and St. Lawrence Railroad was incorporated, and according to one source:

> The opening of the Atlantic and St. Lawrence Railroad to Berlin threw the great advantages of the enormous waterpower of the Androscoggin River into practical availability, and those wise financiers and far-seeing businessmen to whom this railroad owed its existence at once took measures to utilize the falls in the manufacture of lumber (Fergusson, 1889).

Several lumber and paper mills were incorporated in the nineteenth century. A lumber mill was established at the head of the falls, and in 1889, the H. Winslow and Company lumber plant was established. It was one of the largest plants in northeastern New England, employing from 275-300 men for general labor and an additional 300-400 men during the winter months for logging (Fergusson, 1889). In 1866, William W. Brown formed the Berlin Mills Company, and in 1885, the Glen Manufacturing Company was established as a pulp and paper mill. It was one of the best equipped mills in New England (Fergusson, 1889). The population of Berlin in 1890 was only 4000, notes W.A. Fergusson, but this population accounted for about one-sixth of the total population of Coos County (N.H. State Planning, 1946). Many French-Canadians emigrated to Coos County, "...as desperately poor Quebec farmers left for New Hampshire's booming post-war economy. Most headed to the textile mills, but a significant number

settled in the north" (Booth, 1982). Today, about one-fourth of New Hampshire's population has some French-Canadian heritage.

POPULATION CHANGES, 1900-1950

Table 6 shows the population changes in New Hampshire by county from 1900 to 1950.

TABLE 6

NEW HAMPSHIRE COUNTY POPULATION, 1900-1950

	1900	1910	1920	1930	1940	1950
NEW HAMPSHIRE	411,588	430,572	443,083	465,293	491,524	533,242
Belknap	19,526	21,309	21,178	22,623	24,328	26,632
Carroll	16,895	16,316	15,017	14,277	15,589	15,868
Cheshire	31,321	30,659	30,975	33,685	34,953	38,811
Coos	29,468	30,753	36,093	38,959	39,274	35,932
Grafton	40,844	41,652	40,572	42,816	44,645	47,923
Hillsborough	112,640	126,072	135,512	140,165	144,888	156,987
Merrimack	52,430	53,335	51,770	56,152	60,710	63,022
Rockingham	51,118	52,188	52,498	53,750	58,142	70,059
Strafford	39,337	38,951	38,546	38,580	43,553	51,567
Sullivan	18,009	19,337	20,922	24,286	25,442	26,441

Sources: N.H. State Planning, 1946; U.S. Census, 1950.

The population of New Hampshire grew from 411,588 in 1900 to 533,242 in 1950, an increase of 29.5%. By 1910, the urban population in the state had surpassed the rural population, and by 1950, 57.5% of all residents lived in urban areas (U.S. Census, 1950). Not all counties shared in New Hampshire's growth. Carroll County consistently lost population from 1900-1930; Cheshire County lost population from 1900-1920; Belknap and Grafton counties showed losses only between 1910 and 1920, the World War I period. Coos, Rockingham, Hillsborough, and Sullivan all displayed consistent increases of population

from 1900-1940, even through the First World War. By 1950, all counties, except Coos, registered a net gain of population from the 1940 census, ranging from a high of 20.5% for Rockingham County to a low of 1.8% for Carroll County. Coos lost 8.5% of its population from 1940 to 1950.

Not all counties were primarily urban, either. The U.S. Census of 1950 shows that Grafton County was only 28% urban, Rockingham was 41.4%, Cheshire was 40.3%, and Coos was 46.2% urban. Carroll County was 100% rural. The urban counties included Strafford (79%), Hillsborough (77.9%), Sullivan (60%), and Belknap (55.4%). From 1940 to 1950, Coos County showed the only decline in population, both rural and urban. The County's urban loss was 12.9%, while its rural loss was 4.3%.

The reasons for these changes were many and varied. Industry was aging in the North. Buildings and machinery were old and archaic, resulting in reduced efficiency and smaller profits. As a result, many industries moved South and West, bringing with them many of the young adult workers. The two World Wars also affected the population patterns, with higher death rates and a general population redistribution as people returned from war with different goals.

By the early 1900s, New Hampshire's textile industry was on the decline. The buildings, as stated previously, were old and inefficient, having been built vertically instead of horizontally. Labor was cheaper in the South and West, and it was generally less unionized. The Depression of 1929-1933 forced many people to follow the industries out of New Hampshire to find employment. The rural population of New Hampshire increased by 8.4% between 1930 and 1940, possibly because "...city families came to stay with relatives until times were better, or they moved to the country because rents were cheaper and it was possible to raise a part of their food" (Wilson, 1934a).

The Amoskeag Mill shut down completely in 1936, declaring bankruptcy. Many other factories in Manchester had already moved South or had been forced to close. Tamara Hareven (1978) writes that:

> The Amoskeag's fluctuations and decline throughout the twenties and thirties were part of the New England textile industry's larger struggle with southern competition. As early as 1910, the South began to present a serious threat to northern plants. The growth of the industry in the South continued even during a national expansion of productivity that flooded domestic as well as foreign markets with more textiles than they were able to absorb. This problem was further intensified by the introduction of the automatic looms, particularly in the South. The Amoskeag found it difficult to modernize in response to these developments because of the enormous costs that were entailed in retooling a plant of its size.

Following the Amoskeag Mills closure in 1936, the annual out-migration from Manchester was 53% higher than it had been in the five preceeding years. "Of those who left, 93% were former Amoskeag workers, most of whom sought jobs in neighboring New England towns or returned to Quebec" (Hareven, 1978).

Smaller industries moved in to partially fill the vacuum left by the loss of the textile industries. In reference to northern New England as a whole, G.K. Lewis (1972) notes that:

> The 1930s seemed to signal the slow but steady disappearance of factories from northern New England, from Winooski, Vermont, to Bucksport, Maine. Plant buildings were old, machinery obsolete, power expensive, and markets increasingly distant. The catastrophic collapse of one-industry cities like Manchester, New Hampshire and Sandford, Maine, came to represent nationally the decline of manufacturing in New England. Local attempts at attracting new industries and renting empty mill buildings brought some relief, but this was often offset by the low wage scales such industries brought with them. Leather tanneries from Massachusetts, fleeing high-cost union labor, were notorious in this respect.

Natural increase probably helped to keep New Hampshire from registering a negative population growth, although the actual increase was relatively small. Figure 3 summarizes the rates of population change, comparing New Hampshire, New England, and the United States, from 1900 to 1970. New Hampshire's growth rate from 1900 to 1950 is consistently less than the national average, and except for the decade of 1930-1940, it is less than the New England average. The growth rate is less than 10% during this half-century and often it is less than 5%. By 1950, there was a scattering of losses in central and southern New Hampshire towns, "...but the dense concentration of towns losing population was now restricted to Coos County" (Lewis, 1972).

Farm abandonment continued during the first half of the twentieth century. The amount of land used for farms fell from 64% in 1880 to 31% in 1940 (Lapping, 1982). John Stilgoe (1980) notes that "...as late as 1931, the United States Department of Agriculture emphasized that farm abandonment and wilderness encroachment continued as a serious New England problem."

POPULATION CHANGES, 1950-1980

Figure 3, as noted earlier, reflects New Hampshire's growth from the beginning of the twentieth century. The State's population increase of 13.8% from 1950-1960 is greater than New England's rate of 12.8%, but still less than the national average of 18.5%. During the decade of 1960-1970, however, New Hampshire surpassed the national growth rate of 14.2% with a 21.5% increase. New Hampshire is now the fastest growing state east of the Mississippi River (Booth, 1982). From 1970-1980, the population increased by 25%, growing from 737,681 in 1970 to 920,610 in 1980. Table 7 shows the change in population in New Hampshire by county from 1950-1980.

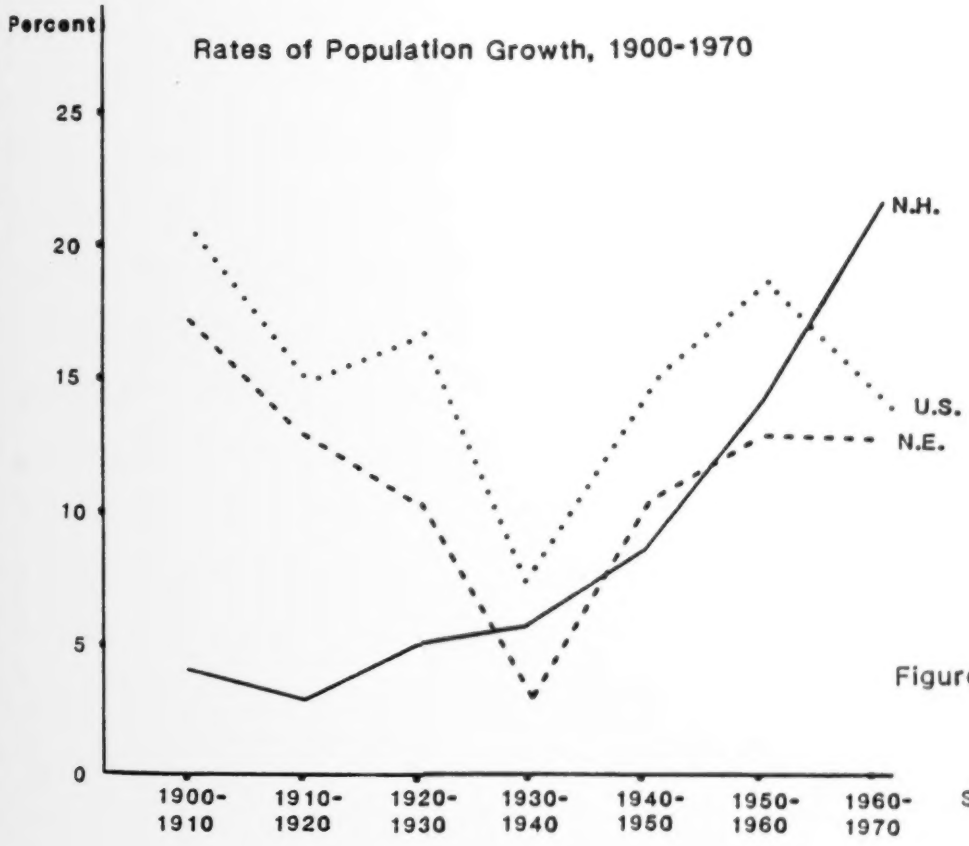


Figure 3

Source: G.K. Lewis, 1972

TABLE 7

POPULATION CHANGE BY COUNTY, 1950-1980

	1950	1960	1970	1980
NEW HAMPSHIRE	533,242	606,921	737,681	920,610
Belknap	26,632	28,912	32,367	42,884
Carroll	15,868	15,829	18,548	27,931
Cheshire	38,811	43,342	52,364	62,116
Coos	35,932	37,140	34,291	35,147
Grafton	47,923	48,857	54,914	65,806
Hillsborough	156,987	178,161	223,941	276,608
Merrimack	63,022	67,785	80,925	98,302
Rockingham	70,059	99,029	138,951	190,345
Strafford	51,567	59,799	70,431	85,408
Sullivan	26,441	28,067	30,949	36,063

Source: U.S. Census, 1950, 1970, 1980.

There is marked contrast between the growth rates of northern and southern New Hampshire. In the northern part of the State, Carroll County lost population in fifteen out of eighteen communitites in 1960 (Lewis, 1972), and Coos County lost 7.7% of its population from 1960 to 1970. Rockingham County in the south recorded the highest population increase (40.4%) from 1960-1970. Robert Booth (1982) observes that the north is "isolated by the White Mountains, an economy of scattered small towns reliant on forest products and tourism... (which)...has not shared the growth of the south." By 1970, however, Carroll County had lost population in just one town out of eighteen, and Coos gained 856 people between 1970 and 1980. The north remains ostensibly rural, except, of course, for Berlin in Coos County. Berlin, however, has been steadily recording losses since 1950, declining 3000 people in thirty years. Carroll County, as of 1970, was still totally rural. This pattern is very different from the phenomenal growth experienced by southern New Hampshire. Hillsborough and Rockingham counties have shown the highest growth rates; between 1960 and 1970, the rates of increase were 25.7% and 40.4%, respectively. Between 1970

and 1980, Hillsborough County increased by 52,667 people, while Rockingham County added 51,394 people. The reasons for this growth are many, both for New Hampshire in general and for the southeast region in particular. They include the expansion of the highway system, the development of "bedroom suburbs" in New Hampshire for Boston commuters, enhancement of the post-secondary educational system, the images promoted of New Hampshire as a "tax-free" and peaceful place to visit, as well as an attractive retirement place, and last, but not least, the development of the high technology industry.

G. K. Lewis (1972) suggests that the expansion of the highway system has had the following effect:

> The reversal of northern New England's long downward trend of population growth can be traced, directly or indirectly, to the proximity of Boston and New York, and to the urbanized areas surrounding or lying between these cities.... Accessibility to northern New England has been radically improved since the 1950s, not only with the virtual completion of the regional Interstate Highway program, but also with the construction of such limited access highways as the Taconic Parkway, and with the upgrading of major state roads to high-speed use throughout the area. It was not until the 1960s that the Interstate Highway System effectively penetrated northern New England.... Travel times have been reduced in some instances as much as fifty percent.

Lewis goes on to state that, by car, the White Mountains are within four to four and one-half hours of Boston, while Concord is now less than two hours north of Boston.

> The completion of Interstate 93 and new construction of Massachusetts Route 3 have accelerated southern New Hampshire's growth, and extended the area involved well beyond Manchester and Concord into Cheshire, Merrimack, and Strafford counties. Many of these same smaller New Hampshire towns also serve a more immediate residential suburb function for the larger cities of southern New

> Hampshire, of which Nashua is the most vigorous. Hudson, New Hampshire, which lies across the Merrimack River from Nashua, experienced an 81% increase in population during the 1960's (Lewis, 1972).

Much of the migration into New Hampshire has been from Massachusetts. That state has a comparatively high tax rate, while New Hampshire has neither a sales nor income tax. This obviously enhances the attraction of New Hampshire residence. Southern New Hampshire towns, "...are becoming bedroom suburbs of Boston...(because):

> Hillsborough and Rockingham counties...offer lower cost living and access to open space and scenic amenities within a reasonable distance of work and shopping. Industrial plants along the western and northern stretches of Massachusetts Route 128, Boston's first major circumferential highway, are only twenty to thirty minutes from Pelham, New Hampshire (1960-70 population increase--107.6%), and jobs in the Merrimack Valley cities of Lowell, Lawrence, and Haverhill are even closer to New Hampshire boundary towns like Atkinson (1960-70 population increase--125.3%) (Lewis, 1972).

The expansion and growth of the state university system during the last three decades has also contributed to the population increase. During the 1960s, the Teacher's Colleges became State Colleges, enlarged their physical plants, and generally attracted a greater variety and number of students. Durham, the site of the University of New Hampshire, grew 61.1% from 1960 to 1970, Plymouth, in the southern part of Grafton County, grew 31.6%, while Keene, in the southwestern corner, registered a smaller increase of 16.5% (Lewis, 1972).

Another significant factor promoting growth in New Hampshire is tourism. It represents one of the state's leading industries. Foliage-viewing, lakes for swimming, boating, and fishing, mountains for hiking and skiing, in

addition to (using Booth's (1982) expression), "picture-postcard villages" attract thousands of visitors annually. Mount Monadnock in Cheshire County draws an average of 125,000 visitors per year, and it is one of the most climbed mountains in the world (Booth, 1982). The former State slogan "Scenic New Hampshire", perhaps reflects the State's conscious efforts to sell an image to the outside world. Tourism inevitably results in development, as the tourist must be both attracted and accommodated.

New Hampshire also seems to attract numerous seasonal residents interested in vacation homes and year-round second homes. General population growth is in part explained by the increase in the purchase of formerly abandoned farms in rural areas for year-round and seasonal occupation (Stilgoe, 1980). These farms are relatively cheap and removed from the noise and activities of the cities. John Stilgoe (1980) asserts that "...even in the 1950s and 60s the farm abandonment continued, and more land passed into the hands of summer people, many of whom chose to live year-round on their properties." In 1970, only 11% of New Hampshire's land area was farmland, but, "...the number of New Englanders who reside in rural areas has increased substantially over the past several decades" (Lapping, 1982). Rockingham County increased its rural population by 40.2% from 1960 to 1970, while Hillsborough increased its rural population by 57.6% (U.S. Census, 1970). This was probably a result of an urban to rural movement as suburbs developed. The abandoned farms also attract many retired people with limited incomes to rural zones, likely due to their low cost and because of the state's tax structure (Lewis, 1972).

THE HIGH TECHNOLOGY INDUSTRY

During the 1950s and 60s, on a national scale, small industries and industrial parks exemplified the "new manufacturing era", but by far the most important reason for southern New Hampshire's growth has been the development of the high technology industry. The high tech industry is concentrated along Massachusetts Route 128 and stretches northward into southeastern New Hampshire. High tech has replaced the dying textile industry, as "...65% of New Hampshire's work force labors in electronics, instrumentations, and metals. Ten years ago, 65% worked in shoes, textiles, and apparel. The state's five top employers now are high tech in whole or part: Digital Equipment, Sanders Associates, General Electric, Kollsman Instrument, and Nashua Corporation." (Karmin, 1982)

Approximately six hundred new businesses have moved into New Hampshire since 1970 (Booth, 1982). Population increases in Rockingham and Hillsborough counties reflect the impact of the industry.

> Nowhere has the recent boom been felt more than in the city of Nashua, southern anchor of the industrial "golden triangle" that reaches north to Manchester and east to Portsmouth. In twenty years, Nashua's population has soared from 39,000 to 60,000, a 75% increase (Booth, 1972).

In a recent issue of U.S. News and World Report, Monroe Karmin calls the Sanders Associates electronics firm "...a sign of this area's second industrial revolution from mill/factory to high technology." Sanders Associates is one of the primary reasons for Nashua's growth. It is a firm which specializes in defense electronics and computer graphics, and in 1981, it had $436 million in sales, while employing 5200 people (Booth, 1972). G.K. Lewis (1972) notes that:

> Sanders Associates, a fast-growing electronics company, got its start in an abandoned factory in Nashua, N.H., established plants in other states and foreign countries as it expanded, and finally built its corporate headquarters directly on the New Hampshire side of the New Hampshire-Massachusetts border.

There are several reasons for the high technology industry's expansion into New Hampshire. Robert Booth (1982) believes that there is ample skilled labor and land available in New Hampshire, the work ethic is still strong, and Nashua's location is ideal, since it is only one hour from Boston, the coast, and the mountains. In combination, these factors, plus New Hampshire's favorable tax structure, have attracted Massachusetts-based firms, such as Digital (in 1975), which, as Booth notes, "...sparked the electronic invasion." Monroe Karmin (1982) adds:

> The key to New Hampshire's success is its hospitatlity to business--in constrast to neighboring "Taxachusetts", as it's known here. "I'm pro-business", declares Democratic Governor Hugh Gallen.* "I need the jobs."...Paul Guilderson, state industrial development director, says an easing of the business tax in 1971 started "a new ballgame". New Hampshire also pioneered in the use of tax-exempt industrial bonds that allow corporations to borrow cheaply.

Added to the fact that New Hampshire has no income or sales tax, which is an added attraction for workers and residents, the high technology industry's future looks very bright, and subsequently, so does the contiued growth of New Hampshire.

---

*New Hampshire Govenor, 1979-1982.

THE 1980s: A PRELIMINARY VIEW

The estimated population for New Hampshire in 1985, according to the New Hampshire Office of State Planning, was 1,019,250, an increase of 10.7% from 1980. Table 8 compares the estimated county population changes from 1980-85, by percentages.

TABLE 8

PERCENT POPULATION CHANGE BY COUNTY, 1980-85

NEW HAMPSHIRE	+ 10.70
Belknap	+ 7.78
Carroll	+ 14.53
Cheshire	+ 7.30
Coos	- 0.05
Grafton	+ 5.77
Hillsborough	+ 11.30
Merrimack	+ 9.30
Rockingham	+ 15.60
Strafford	+ 11.80
Sullivan	+ 8.03

Source: Keene Sentinel, 1985.

The northern counties in the state are not growing as quickly as the southern counties, continuing the pattern of historical growth noted earlier. This presents an interesting dichotomy. There is a potential for conflict between the prosperous, "Massachusetts-like" southeast and the rest of the state. The expansion of Bay-Staters into New Hampshire has created many problems associated with growth, such as the need for more civil and state services, better roads, landfills, water treatment plants, to name but a few. In short, many Massachusetts natives come to live in New Hampshire because of the "unspoiled, scenic beauty" and the lack of a broad-based tax. But, once residence is established they try to change their new communities into the modern suburbs

which they left behind. This, of course, often necessitates a broad-based tax system. There appears to be growing resentment between the southeast, which appears to be an extension of the eastern seaboard of Massachusetts, and the rest of the more "rural" state.

CONCLUSION

New Hampshire has witnessed three distinct periods of growth and population redistribution, including a slowly growing agricultural and pre-industrial mercantilistic phase, with a relatively scattered rural population; a period during the nineteeneth century's Industrial Revolution, which focused major population growth in the textile and lumber mills of Manchester and Berlin, respectively; and the high technology era, which is currently drawing population to the southeastern corner of New Hampshire. In 1790, 97% of the people lived in rural areas; by 1910, the majority lived in urban areas. New Hampshire's population has increased from 141,885 in 1790 to an estimated one million in 1985. During the decade from 1960 to 1970, the growth rate of 21.5% was considerably higher than the national rate of 14.2%, and between 1970 and 1980, New Hampshire became the fastest growing state in the East, with a growth rate of 25%. in only the next 24 years the New Hampshire Office of State Planning estimates that the population will grow a staggering 55% to 1.5 million in the year 2010. Clearly, growth is proceeding at a pace unseen before in New Hampshire's history. Whether this growth will bring benefits or problems is the management challenge New Hampshire faces as it enters the twenty-first century.

BIBLIOGRAPHY

Booth, Robert. "Contrary New Hampshire", National Geographic, Vol. 162, No. 6 (December 1982), p. 770-799.

Fergusson, W.A. "Berlin", The Granite Monthly, Vol. II, No. 5, 6 (May/June 1889), p. 132-143.

Fredenberg, Aldene. "Population Up in Area, But Below NH Rate", Keene Sentinel, November 29, 1985.

Geiser, Kenneth. "Reformulation of the Cities", New England Prospects: Critical Choices in a Time of Change. Carl Reidel, ed. (Hanover: University Press of New England, 1982), p. 178-204.

Hanlon, James P. The Working Population of Manchester, New Hampshire 1840-1886 (Michigan: UMI Research Press, 1979).

Hareven, Tamara K. and Randolph Langenbach. Amoskeag, Life and Work in an American Factory City (NY: Pantheon Books, 1978).

Heads of Families: First Census of the United States, 1790, New Hampshire (South Carolina: The Reprint Company, 1964).

Hill, Ralph Nading. Yankee Kingdom: Vermont and New Hampshire (NY: Harper and Brothers, 1960).

Historical Statistics of the United States: Colonial Times to 1970, Part 2 (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1975), p. 1168.

Karmin, Monroe W. and Jeffrey L. Sheler. "A Mill Town is Reborn: Nashua, New Hampshire", U.S. News and World Report, Vol. 93, No. 11 (Sept. 13, 1982), p. 56.

Labarre, Benjamin W. "A Historical Perspective", New England Prospects: Critical Choices in a Time of Change. Carl Reidel, ed. (Hanover: University Press of New England, 1982), p. 24-58.

Lapping, Mark B. "Toward a Working Rural Landscape", New England Prospects: Critical Choices in a Time of Change. Carl Reidel, ed. (Hanover: University Press of New England, 1982), p. 59-82.

Lewis, G.K. "Population Change in Northern New England", Annals of the Association of American Geographers, Vol. 62, No. 2 (June 1972), p. 307-322.

New Hampshire Census of 1800 (Madison, WI: J.B. Threlfall, 1973).

New Hampshire Census of 1810, Index. Ed. by Ronald V. Jackson, et al (Utah: Accelerated Indexing Systems, Inc., 1976).

New Hampshire Census of 1850, Index. Ed. by Ronald V. Jackson, et al (Utah: Accelerated Indexing Systems, Inc., 1978).

New Hampshire State Planning and Development Commission. Population of New Hamsphire: Basic Data on Growth and Distribution Since the Time of Settlement, 1623-1940 (Concord, New Hampshire: 1946).

1950 Census of Population, Vol II, Characteristics of the Population, Part 29, New Hampshire (Washington, D.C.: U.S. Dept. of Commerce, 1952).

1970 Census of Population, General Social and Economic Characteristics, Part 31, New Hampshire (Washington, D.C.: U.S. Dept. of Commerce, Bureau of the Census, Jan. 1973).

1980 Census of Population, General Social and Economic Characteristics, Part 31, New Hampshire (Washington, D.C.: U.S. Dept. of Commerce, Bureau of the Census, July 1983).

Sanborn, Edwin. History of New Hampshire, From Its First Discovery to the Year 1830 (Manchester, NH: John B. Clarke, 1875).

Stilgoe, John R. "The Wildering of Rural New England 1850-1950", Proceedings of the New England-St. Lawrence Valley Geographical Society, Vol. X (Oct. 1980), p. 1-5.

Wallace, William H. "Some Aspects of Colonial Settlement in New Hampshire", Proceedings of the New England-St. Lawrence Geographical Society, Vol. VII (Oct. 1977), p. 16-23.

Wilson, Harold F. "Population Trends in Northwestern New England, 1790-1930", The Geographical Review, Vol. 24 (April 1934a), p. 272-277.

Wilson, Harold F. "Population in Northern New England", New England Quarterly, Vol. 7 (June 1934b), p. 276-306.